DETAILED ACTION

The amendment filed on July 02, 2009 has been noted, Claim 3 has been canceled. New claim 12 has been added. Claims 1-2, 4-12 are pending.

Election/Restrictions

1. In the response, Applicants insist that claims 9-10 depend on the elected claim 1, they should be rejoined with elected group I of claims.

2. Upon further searching and considering the pending claims, claims 9-10 are rejoined with the elected group I.

3. Claims 1-4 and 6-11 in the scope of monoclonal antibody with accession No. FERM BP-10144 are considered.

4. Claim 5 is still withdrawn from consideration. Applicants are reminded that the sequence cited in claim 5 is not a further limitation of claim 1, it will not be rejoined.

Priority

5. The acknowledgement is made to the English-translated foreign priority submitted by Applicants.

Claim Rejections - 35 USC § 112 (withdrawn)

The rejection of claims 4 and 7 under 35 U.S.C. 112, first paragraph has been removed in view of Applicants' assurance statement provided in the response.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. For the following rejections, Applicants are reminded: Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

8. (Withdrawn) The rejection of claims 1-2, 6, 8, 11 under 35 U.S.C. 102(a) as anticipated by Berry et al. (J. Virol. Method July 2004, Vol. 120, pp. 87-96) has been removed in view of the foreign priority document submitted by Applicants in the response.

9. (Withdrawn) Claims 1-3, 6, 8, 11 are rejected under 35 U.S.C. 102(b) as anticipated by Che et al. (B) (J. Clin. Microbial, July 2004, Vol. 42, No. 6, pp. 2629-2635) under 35 U.S.C. 102(a) in light of the teaching by Marr et al. (Science, May 2003, Vol. 300, pp. 1399-1404) has been removed in view of the foreign priority document submitted by Applicants in the response.

10. Claims 1-3, 6, 8, 11 are rejected under 35 U.S.C. 102(b) as anticipated by Che et al. (A) (J. First Mil. Med. University 2003 Jul;23(7):640-642), which is substantiated in light of the disclosures by Rota et al. (Science 2003, Vol. 300, No. 5624, pp. 1394-1399) and US patent No. 7,547,512B2 and WO 2004085650A1 both to University of Hong Kong.

11. In the response, Applicants submit two major arguments in that 1). Che (A) fails to describe the SEQ ID NO: 1 and 2). The N protein used by Che (A) is not from university of Hong Kong, and 3). The virus disclosed by Marra et al. belongs to the original case cluster from Toronto, Canada. Therefore, the N protein described by Che (A) is not necessarily the same as the sequence described in the instant case.

12. Applicants' argument has been respectfully considered. However, although the SARS virus disclosed by Marra et al. is not used by University of Hong Kong, the argument is still not found persuasive to overcome the rejection with reasons set forth below:

13. A). Che (A) does describe that the N protein used for raising the monoclonal antibody is provided by University of Hong Kong;

14. B). The N protein used by Che (A) is the one with 100% identical to SEQ ID NO: 1 cited in claims although they do not use the virus disclosed by Marra et al.

15. There are several strains of SARS viruses in the art prior to the current Application was filed. According to the instant Application, The nucleoprotein (N protein) used by Applicants to generate the monoclonal antibody is from the Urbani strain as Applicants described in the instant Application (Rota et al. Science 2003, Vol. 300, Vol. 5624), pp. 1394-1399). The N protein used by Che (A) is provided by the University of Hong Kong (See page 641, section 1.21, lines 2-3 in

first column). Although the complete viral genomes disclosed by University of Hong Kong and the Urbani strain are not identical in full length, the two N proteins are identical as evidenced by Rota et al. and in light of the disclosures by University of Hong Kong in US patent 7,547,512B1 or WO 2004856590A1. Therefore, it is concluded that the claimed SEQ ID NO: 1 is the one having 100% identical to N protein used by Che (A).

16. In particularly, N protein is encoded by the nucleic acid sequence starting from the position 28,120 bp and ending at 29,385, but there is no difference between each other in these N protein coding regions (please see the supporting on line material by Rota et al. for Table S1 and Table S3). The two strains comprises an identical N protein in light of the disclosure by University of Hong Kong in US patent No. 7,547,512B2 (SEQ ID NOs: 2471 and 231) or WO 2004085650A1 (SEQ ID NOs: 2471, 2472) according to the sequences alignments analyses.

```
SEQ ID NO 2471
;   LENGTH: 1269
;   TYPE: DNA
;   ORGANISM: Human severe acute respiratory syndrome virus
US-7547512

  Query Match             100.0%;  Score 1269;  DB 8;  Length 1269;
  Best Local Similarity   100.0%;
  Matches 1269; Conservative    0;  Mismatches   0; Indels    0;  Gaps    0;

Qy          1 ATGTCTGATAATGGACCCCAATCAAACCAACGTAGTGCCCCCCGCATTACATTTGGTGGA 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 ATGTCTGATAATGGACCCCAATCAAACCAACGTAGTGCCCCCCGCATTACATTTGGTGGA 60

Qy         61 CCCACAGATTCAACTGACAATAACCAGAATGGAGGACGCAATGGGGCAAGGCCAAAACAG
120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 CCCACAGATTCAACTGACAATAACCAGAATGGAGGACGCAATGGGGCAAGGCCAAAACAG
120

Qy        121 CGCCGACCCCAAGGTTTACCCAATAATACTGCGTCTTGGTTCACAGCTCTCACTCAGCAT
180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 CGCCGACCCCAAGGTTTACCCAATAATACTGCGTCTTGGTTCACAGCTCTCACTCAGCAT
180

Qy        181 GGCAAGGAGGAACTTAGATTCCCTCGAGGCCAGGGCGTTCCAATCAACACCAATAGTGGT
240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 GGCAAGGAGGAACTTAGATTCCCTCGAGGCCAGGGCGTTCCAATCAACACCAATAGTGGT
240

Qy        241 CCAGATGACCAAATTGGCTACTACCGAAGAGCTACCCGACGAGTTCGTGGTGGTGACGGC
300
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                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       241 CCAGATGACCAAATTGGCTACTACCGAAGAGCTACCCGACGAGTTCGTGGTGGTGACGGC
300

Qy       301 AAAATGAAAGAGCTCAGCCCCAGATGGTACTTCTATTACCTAGGAACTGGCCCAGAAGCT
360

                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       301 AAAATGAAAGAGCTCAGCCCCAGATGGTACTTCTATTACCTAGGAACTGGCCCAGAAGCT
360

Qy       361 TCACTTCCCTACGGCGCTAACAAAGAAGGCATCGTATGGGTTGCAACTGAGGGAGCCTTG
420

                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       361 TCACTTCCCTACGGCGCTAACAAAGAAGGCATCGTATGGGTTGCAACTGAGGGAGCCTTG
420

Qy       421 AATACACCCAAAGACCACATTGGCACCCGCAATCCTAATAACAATGCTGCCACCGTGCTA
480

                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       421 AATACACCCAAAGACCACATTGGCACCCGCAATCCTAATAACAATGCTGCCACCGTGCTA
480

Qy       481 CAACTTCCTCAAGGAACAACATTGCCAAAAGGCTTCTACGCAGAGGGAAGCAGAGGCGGC
540

                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       481 CAACTTCCTCAAGGAACAACATTGCCAAAAGGCTTCTACGCAGAGGGAAGCAGAGGCGGC
540

Qy       541 AGTCAAGCCTCTTCTCGCTCCTCATCACGTAGTCGCGGTAATTCAAGAAATTCAACTCCT
600

                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       541 AGTCAAGCCTCTTCTCGCTCCTCATCACGTAGTCGCGGTAATTCAAGAAATTCAACTCCT
600

Qy       601 GGCAGCAGTAGGGGAAATTCTCCTGCTCGAATGGCTAGCGGAGGTGGTGAAACTGCCCTC
660

                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       601 GGCAGCAGTAGGGGAAATTCTCCTGCTCGAATGGCTAGCGGAGGTGGTGAAACTGCCCTC
660

Qy       661 GCGCTATTGCTGCTAGACAGATTGAACCAGCTTGAGAGCAAAGTTTCTGGTAAAGGCCAA
720

                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       661 GCGCTATTGCTGCTAGACAGATTGAACCAGCTTGAGAGCAAAGTTTCTGGTAAAGGCCAA
720

Qy       721 CAACAACAAGGCCAAACTGTCACTAAGAAATCTGCTGCTGAGGCATCTAAAAAGCCTCGC
780

                 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       721 CAACAACAAGGCCAAACTGTCACTAAGAAATCTGCTGCTGAGGCATCTAAAAAGCCTCGC
780

Qy       781 CAAAAACGTACTGCCACAAAACAGTACAACGTCACTCAAGCATTTGGGAGACGTGGTCCA
840
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                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        781 CAAAAACGTACTGCCACAAAACAGTACAACGTCACTCAAGCATTTGGGAGACGTGGTCCA
840

Qy        841 GAACAAACCCAAGGAAATTTCGGGGACCAAGACCTAATCAGACAAGGAACTGATTACAAA
900

                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        841 GAACAAACCCAAGGAAATTTCGGGGACCAAGACCTAATCAGACAAGGAACTGATTACAAA
900

Qy        901 CATTGGCCGCAAATTGCACAATTTGCTCCAAGTGCCTCTGCATTCTTTGGAATGTCACGC
960

                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        901 CATTGGCCGCAAATTGCACAATTTGCTCCAAGTGCCTCTGCATTCTTTGGAATGTCACGC
960

Qy        961 ATTGGCATGGAAGTCACACCTTCGGGAACATGGCTGACTTATCATGGAGCCATTAAATTG
1020

                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        961 ATTGGCATGGAAGTCACACCTTCGGGAACATGGCTGACTTATCATGGAGCCATTAAATTG
1020

Qy       1021 GATGACAAAGATCCACAATTCAAAGACAACGTCATACTGCTGAACAAGCACATTGACGCA
1080

                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1021 GATGACAAAGATCCACAATTCAAAGACAACGTCATACTGCTGAACAAGCACATTGACGCA
1080

Qy       1081 TACAAAACATTCCCACCAACAGAGCCTAAAAAGGACAAAAAGAAAAAGACTGATGAAGCT
1140

                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1081 TACAAAACATTCCCACCAACAGAGCCTAAAAAGGACAAAAAGAAAAAGACTGATGAAGCT
1140

Qy       1141 CAGCCTTTGCCGCAGAGACAAAAGAAGCAGCCCACTGTGACTCTTCTTCCTGCGGCTGAC
1200

                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1141 CAGCCTTTGCCGCAGAGACAAAAGAAGCAGCCCACTGTGACTCTTCTTCCTGCGGCTGAC
1200

Qy       1201 ATGGATGATTTCTCCAGACAACTTCAAAATTCCATGAGTGGAGCTTCTGCTGATTCAACT
1260

                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1201 ATGGATGATTTCTCCAGACAACTTCAAAATTCCATGAGTGGAGCTTCTGCTGATTCAACT
1260

Qy       1261 CAGGCATAA 1269
                |||||||||
Db       1261 CAGGCATAA 1269

WO200485650A1, SEQ ID NO: 2472
Query Match             100.0%;  Score 2227;  DB 1;  Length 422;
Best Local Similarity   100.0%;  Pred. No. 2.8e-189;
Matches  422;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
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Qy          1 MSDNGPQSNQRSAPRITFGGPTDSTDNNQNGGRNGARPKQRRPQGLPNNTASWFTALTQH 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MSDNGPQSNQRSAPRITFGGPTDSTDNNQNGGRNGARPKQRRPQGLPNNTASWFTALTQH 60

Qy         61 GKEELRFPRGQGVPINTNSGPDDQIGYYRRATRRVRGGDGKMKELSPRWYFYYLGTGPEA
120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GKEELRFPRGQGVPINTNSGPDDQIGYYRRATRRVRGGDGKMKELSPRWYFYYLGTGPEA
120

Qy        121 SLPYGANKEGIVWVATEGALNTPKDHIGTRNPNNNAATVLQLPQGTTLPKGFYAEGSRGG
180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SLPYGANKEGIVWVATEGALNTPKDHIGTRNPNNNAATVLQLPQGTTLPKGFYAEGSRGG
180

Qy        181 SQASSRSSSRSRGNSRNSTPGSSRGNSPARMASGGGETALALLLLDRLNQLESKVSGKGQ
240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SQASSRSSSRSRGNSRNSTPGSSRGNSPARMASGGGETALALLLLDRLNQLESKVSGKGQ
240

Qy        241 QQQGQTVTKKSAAEASKKPRQKRTATKQYNVTQAFGRRGPEQTQGNFGDQDLIRQGTDYK
300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 QQQGQTVTKKSAAEASKKPRQKRTATKQYNVTQAFGRRGPEQTQGNFGDQDLIRQGTDYK
300

Qy        301 HWPQIAQFAPSASAFFGMSRIGMEVTPSGTWLTYHGAIKLDDKDPQFKDNVILLNKHIDA
360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 HWPQIAQFAPSASAFFGMSRIGMEVTPSGTWLTYHGAIKLDDKDPQFKDNVILLNKHIDA
360

Qy        361 YKTFPPTEPKKDKKKKTDEAQPLPQRQKKQPTVTLLPAADMDDFSRQLQNSMSGASADST
420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 YKTFPPTEPKKDKKKKTDEAQPLPQRQKKQPTVTLLPAADMDDFSRQLQNSMSGASADST
420

Qy        421 QA 422
              ||
Db        421 QA 422
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17.

18. C). Regarding claims 9-10, without a particular identification, the antibody mobilization and labeling cited in claims are considered to be made directly or indirectly. Che et al. (A) disclose an immunoassay comprising to mobilize the anti-SARS N protein monoclonal antibody onto the N protein coated 96 well plates, wherein the antibody/antigen complex is finally detected by a HRP labeled secondary antibody and visualized by the substrate reacting to the

HRP labeled antibody/antigen complex in the same 96 well ELISA plate. Therefore, the disclosure by Che et al. (A) also meets the limitations of claims 9-10.

Therefore, the claimed subject matter is still anticipated by Che (A) for the reasons set forth above and the rejections should be maintained.

19.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BAO LI whose telephone number is (571)272-0904. The examiner can normally be reached on 6:30 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mondesi Robert can be reached on 571-272-0956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bao Qun Li/
Examiner, Art Unit 1648